



## Green Infrastructure Framework 3: Access and Recreation

March 2020



**This Strategy has been prepared by the [Worcestershire Green Infrastructure Partnership](#), consisting of the following organisations:**

Bromsgrove District Council  
English Heritage  
Environment Agency  
Forestry Commission  
Malvern Hills District Council  
Natural England  
Redditch Borough Council  
Sustrans  
Woodland Trust  
Worcester City Council  
Worcestershire Biological Records Centre  
Worcestershire County Council  
Worcestershire Wildlife Trust  
Wychavon District Council  
Wyre Forest District Council

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# 1. Introduction

## 1.1 Worcestershire Green Infrastructure Partnership

The Worcestershire Green Infrastructure Partnership (GI Partnership) is a cross-disciplinary partnership of statutory agencies, voluntary organisations, Worcestershire's city, borough and districts councils and the county council. The purpose of the GI Partnership is to optimise the planning and delivery of green infrastructure (GI) in Worcestershire. It works to integrate multifunctional GI into developments and projects across the county in order to maximise its benefits to the natural and built environment. The partners represent a diverse range of interests, encompassing the natural and historic environment, sustainability, recreation, health and transport.

## 1.2 Worcestershire Green Infrastructure Strategy and evidence base

The GI Partnership developed the [Worcestershire Green Infrastructure Strategy 2013-18](#) as a non-statutory county-wide guidance document setting out high-level priorities to be further investigated and delivered at the local and site level. The Strategy has been adopted by the District Councils or endorsed through District Council Local Plans. It has also been supported and promoted by the Worcestershire Local Nature Partnership and Worcestershire Local Enterprise Partnership. The Strategy aims to direct and drive the delivery of GI in the county and inform relevant strategies and plans prepared by partner organisations.

The Worcestershire GI Strategy is informed by four evidence base documents and additional guidance notes which can be found on [Worcestershire County Council's webpages](#).

## 1.3 Context

GI presents an alternative approach to planning that is proactive, multi-scale and multi-functional. GI presents a co-ordinated interdisciplinary approach to environmental planning and regeneration, comparable to that used in built or 'grey' infrastructure planning. GI can deliver benefits to the environment and can also contribute to the development of better places in which to live, work and invest.

There is, however, a limit on the extent to which multifunctionality can be pursued without impairing the delivery of one or more of the services involved. For example, there may be trade-offs to be made between archaeology and diversity of wildlife or flood management.

## 1.4 Purpose

This document is one of a suite of GI evidence base papers prepared to support the Worcestershire GI Strategy and the wider work of the GI Partnership. It is a guidance document that aims to enable the strategic planning, co-ordination, delivery and management of existing and future green spaces.

This paper identifies key principles and constraints surrounding the existing provision and creation of new recreation opportunities in Worcestershire.

## 1.5 Audience

This document is intended to support members of the GI Partnership, including Local Planning Authorities (LPAs) and other organisations involved in the development of GI policies and strategies. It also aims to inform strategies and projects undertaken by the wider community and stakeholders, including Parish Councils, schools and interest groups. Additionally, it supports the work of the Worcestershire Local Nature Partnership and Worcestershire Local Enterprise Partnership and aims to help developers interpret GI issues, and to assist in site master planning.

## 2. Existing provision

Access and recreation provision is one of the underpinning elements of green infrastructure, and plays a key role in the social, economic and environmental well-being of Worcestershire's communities. Access and recreation can take many forms, in many different locations, bringing quantifiable and qualitative benefits to residents and visitors alike.

Worcestershire residents value access and recreation opportunities. The 2019 Worcestershire Viewpoint survey identified that residents consider 'access to nature' as one of the top five most important things that make somewhere a good place. Parks and open spaces were also highly valued by the survey respondents<sup>1</sup>.

The focus of this paper is on informal recreation in the natural and semi-natural environment where recreation is most likely to complement other aspects of GI including biodiversity, historic environment, landscape and blue infrastructure. Informal recreation can be understood as land open to the public where the site itself is free to enter and used by non-paying persons for leisure or recreation, such as a cycle and walking path, canal path, river walk, informal outdoor recreation park, picnic site, etc. The interest of this paper is in informal recreation performed outdoors and set in the context of, or making use of, the wide range of green spaces available in Worcestershire.

Other strategies, plans and programmes, including open space assessments and strategies, provide direction and local action planning for formal recreation.

### 2.1 Recreation assets in Worcestershire

Within the county, there is a range of existing natural open space which delivers a wide range of recreational opportunities.

These include:

- Publicly and privately owned and managed countryside sites such as country parks, picnic sites and countryside visitor attractions, which offer facilities and services to users;
- Public parks which offer informal open space as well as play equipment, sports pitches and formal gardens;
- Recreational routes including short and long-distance walking and cycling routes;
- Recreational routes along canals and rivers which include walking and cycling opportunities;
- Public rights of way network;
- Permissive rights of way network; and
- Rivers, canals and water bodies offering opportunities for canoeing, sailing and other water sports.

Figure 1 shows the informal outdoor access and recreation opportunities available in Worcestershire. All the opportunities shown on the map are free at the point of entry onto the site. It should be noted that many privately-managed sites and routes exist which are not shown on the map. The map does not include urban parks and neighbourhood-scale green spaces, due to lack of information and/or difficulty in displaying them at the county scale.

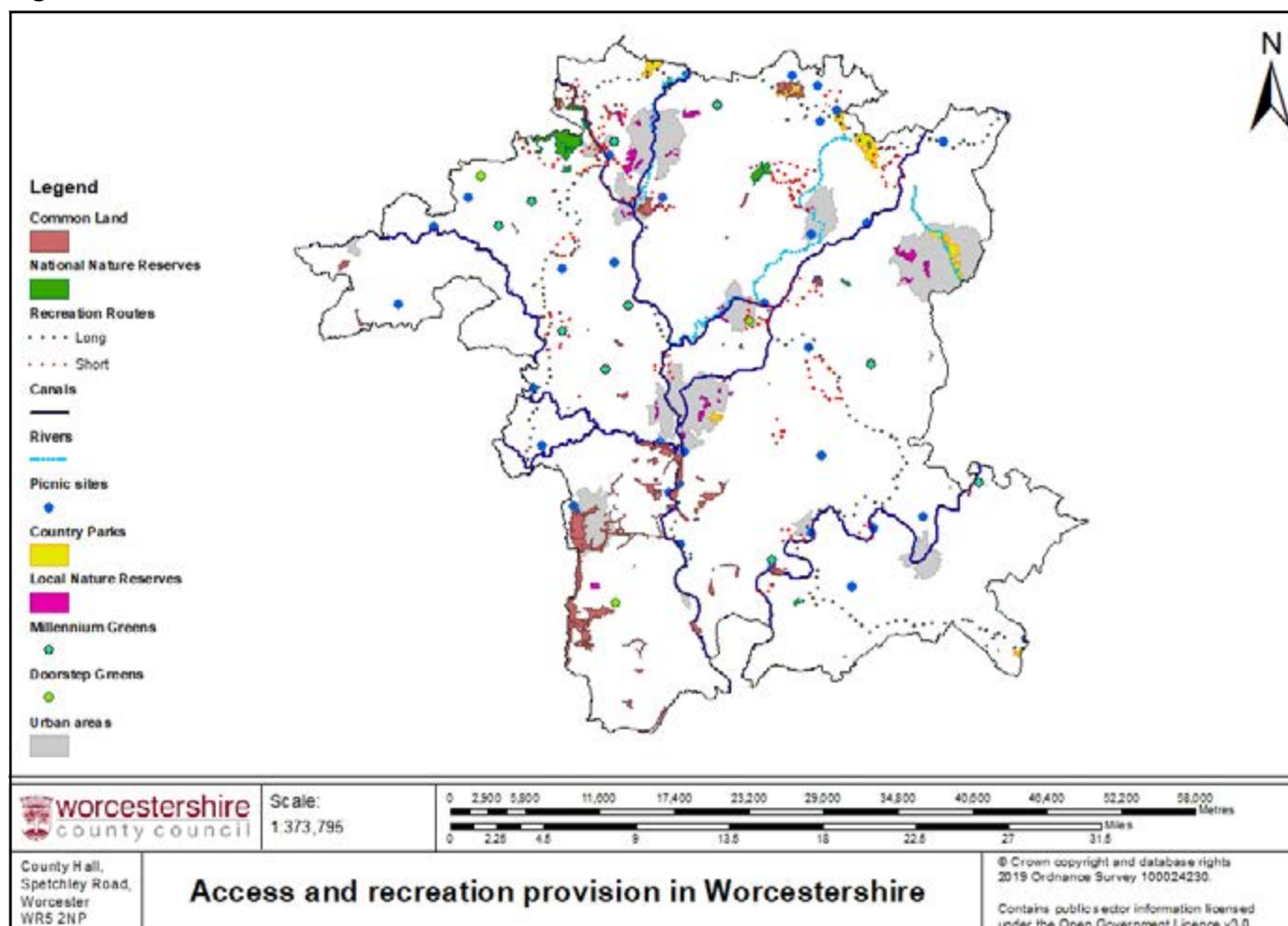
1 Worcestershire County Council, Viewpoint Survey June 2019 [http://www.worcestershire.gov.uk/info/20044/research/361/worcestershire\\_viewpoint\\_citizens\\_panel](http://www.worcestershire.gov.uk/info/20044/research/361/worcestershire_viewpoint_citizens_panel)

There are over 5,500 hectares of land available for recreation in Worcestershire. This is made up of sites such as country parks, nature reserves, picnic places and access land. It is now thought that this figure is likely to under-represent the area available for recreation<sup>2</sup>, as more sites have become accessible in recent years through legislation such as the Countryside and Right of Way Act (the CRow Act) (2000) and new elements of access created through agri-environment schemes.

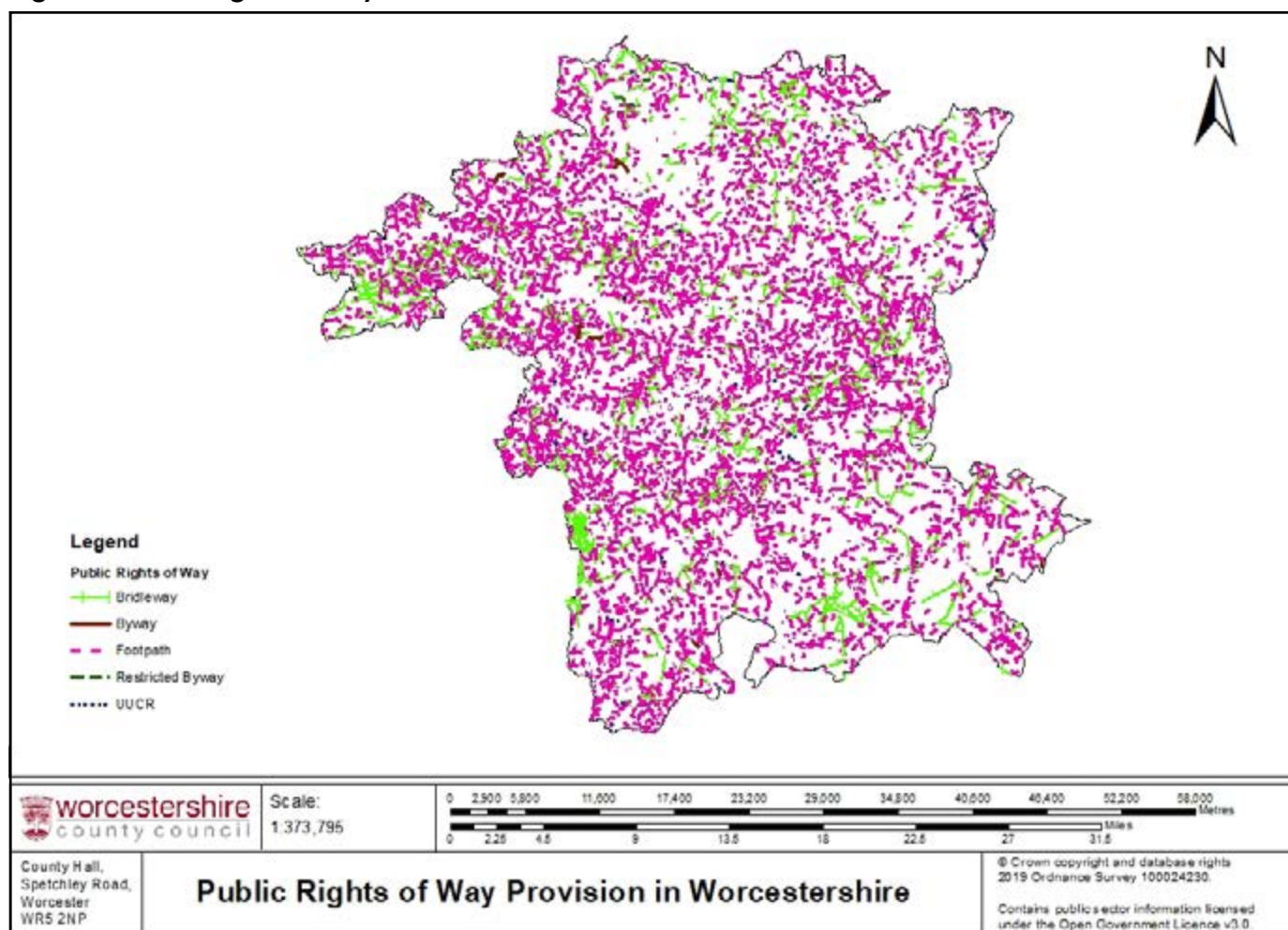
The distribution of these recreational assets in the county is not uniform. Spatial analysis of sites across the county highlights clusters of larger sites in the north of the county in Wyre Forest, Redditch and Bromsgrove districts. A second cluster can be identified along the western edge of the county, including the Malvern Hills. The eastern fringe of the county which falls within Wychavon district has very few accessible informal sites. The full list of key informal recreation assets mapped on Figure 1 can be found in Appendix 2.

Figure 2 illustrates an extensive network (around 4,600 kilometres) of Public Rights of Way (PROW) made up of public footpaths, bridleways, Restricted Byways and Byways Open to All Traffic (BOAT). The map shows that the concentration of PROW in the county varies. The central and western parts of Worcestershire are served very well, whilst the provision is sparser in the north and south-east. The network is also poorly represented in and around Kidderminster.

**Figure 1: Access and Recreation Provision in Worcestershire**



2 Worcestershire County Council Countryside Services (pers. comm.)

**Figure 2: Public Rights of Way**

## Wyre Forest

The District has a number of large informal recreation assets:

- The Wyre Forest
- Ribbesford Wood
- Stourport-on-Severn Riverside Meadows
- Blackstone Riverside Park
- Habberley Valley Nature Reserve
- Part of Kinver Edge
- Arley Wood and Coldridge Wood
- Wyre Forest Heathlands (Rifle Range, Devil's Spittleful and Burlish Top Nature Reserves)

The Wyre Forest, a significant part of which is a National Nature Reserve (NNR), is the largest area of publicly accessible forest in the county. The River Severn and the Staffordshire and Worcestershire Canal both flow through the district and there are also two Sustrans Routes: 54 which connects Stourport-On-Severn with Kidderminster, and 45 which cuts through the middle of the Wyre Forest.

There are a number of smaller community sites within the district, such as millennium and doorstep greens (e.g. Blakedown and Wribbenhall). Wyre Forest District Council manages a range of formal parks and green spaces within Stourport, Bewdley and Kidderminster and a number of large and small nature reserves within the urban areas. The Public Rights of Way network in the district is well-used for commuting and leisure, with many circular routes in and around the Wyre Forest itself.

## Redditch

As a result of Redditch's designation as a new town and its rapid growth post-1964, its character is significantly different from some of the older towns. The layout of Redditch was considered strategically through the development and master planning process and the town benefits from significant provision of open and green spaces. As well as Arrow Valley Country Park there are a number of nature reserves that are well-used due to their urban location.

Due to its urban nature, the Public Rights of Way network is very sparse in the majority of the borough. The more rural southern edge around Feckenham and Astwood Bank has a greater density of paths and bridleways. The borough has two Sustrans routes, 5 and 55. Route number 5 takes in Arrow Valley Country Park, whilst route 55 crosses the north-eastern edge of the borough.

## Bromsgrove

The key recreation assets in Bromsgrove include:

- Lickey Hills Country Park
- Clent Hills
- Waseley Hills Country Park
- Chaddesley Wood National Nature Reserve

The district has two canals that pass through it, the Stratford-upon-Avon Canal and the Worcester and Birmingham Canal. Two Sustrans routes, 5 and 46, cross through the centre of the district.

There are a number of formal and more natural community green spaces managed by parish councils and community groups throughout the district. Some areas of the district have a relatively dense Public Rights of Way network, whilst in other areas - in particular to the north and east of Bromsgrove town - the PROW network is sparser.

## Worcester

Given its urban nature, it is not surprising that there are only two large assets in Worcester City. These are:

- Worcester Woods Country Park
- Worcester Riverside (River Severn)

Other significant linear GI assets are the Worcester and Birmingham Canal and the Rivers Teme (designated a SSSI) and Severn. The recreation opportunities of the River Teme are limited here, however, as it runs through the south-western edge of the city only and passes predominantly through farmland. Sustrans Route 45 (St Peters and the Worcester and Birmingham Canal) and Route 46 (St John's, the river side and Northwick) also pass through the city.



Worcester Woods Country Park is heavily used, offering a variety of facilities such as a visitor centre and café as well as children's play areas and informal recreation opportunities. The catchment area for visitors to the Country Park includes the whole city and nearby communities.

Worcester Riverside offers a range of recreational opportunities in the heart of the city. In recent years considerable investment has been made in this area, increasing recreation opportunities and its attractiveness for visitors. This investment has included the Sustrans cycling route along the river, and the associated Diglis Bridge.

Within the city, there are many smaller nature reserves and natural green spaces such as Warndon Woods, Tolladine Wood, Perry Wood, Gorse Hill and Elbury Mount, Ronkswood Hill Meadows and Cherry Orchard Nature Reserve, all of which have high levels of use as they are on the doorstep for many people, and the City Council provides good access to such sites.

The Public Rights of Way are relatively sparse due to the city's urban nature and there is a general absence of bridleways.

## Wychavon

The rural nature of Wychavon district means that recreational provision is needed both at a neighbourhood level for communities, as well as at a main settlement level, through providing larger assets.

The district has four key recreation assets:

- The Valley (Formerly Evesham Country Park)
- Evesham Battlefield
- Bredon Hill
- Hartlebury Common

The Droitwich Canals, the Worcester and Birmingham Canal and the Rivers Severn and Avon all run through the district and are linear GI assets. Four national Sustrans routes also run within the district, although all are largely on the western edge. These are route 46 which begins in Bromsgrove and runs through Droitwich to Worcester, 45 which connects the southern edge of the district with Worcester City, 41 which cuts through Tewksbury towards Evesham and 442 which runs from Worcester to Evesham and then, after a gap, from Honeybourne east to the county boundary.

The Valley is a privately-owned leisure and retail facility on the edge of Evesham. It offers a range of facilities for informal recreation alongside the River Avon, with formal recreation facilities including a garden centre, restaurants and shops. There are plans to expand the leisure facilities on offer.

Bredon Hill is one of the outliers of the Cotswolds AONB. It is in the south of the county and is used primarily for informal recreation using the network of footpaths on the site. Part of Bredon Hill is designated a Special Area of Conservation and a National Nature Reserve and is therefore very sensitive to visitor pressure.

There are some deficiencies in opportunities for informal access and recreation in this area, particularly in the Vale of Evesham. Here the Public Rights of Way network is less dense than in other areas of the county. There is also an absence of sites such as country parks, picnic places and Registered Commons.

Although not part of this study, both Evesham and Pershore are well-served by urban parks and other small-scale green spaces such as meadows and gardens. A number of nature reserves exist, such as Avon Meadows in Pershore and Stoulton Woods, both managed by Wychavon District Council. There are also a number of community sites such as Village Greens and Millennium Greens within the many smaller settlements. With the proposed housing growth in Evesham, Pershore and some larger villages, a greater provision of accessible green space is required.

## Malvern Hills

Malvern Hills district is largely rural and includes a significant part of the Malvern Hills AONB. The main ridge of the Hills and the Commons to the east are managed by the Malvern Hills Trust and are a significant asset to Worcestershire in terms of access and recreation provision. The AONB designation means that the hills attract visitors from a much wider area than just Worcestershire and so growth in surrounding sub-regions will also exacerbate visitor pressure. Malvern's urban area is formed from the settlements of Great Malvern, Malvern Link, Barnard's Green, West Malvern, and Malvern Wells.

The River Teme runs through the district from where it meets the county boundary just west of Tenbury until its confluence with the Severn at Worcester. This section of the Teme is very rural, but along its length it is accessible in some places via the Public Rights of Way network. A number of long distance walking and/or cycling trails pass through the district, including a small part of the Three Rivers Leisure Cycle Ride, promoted by Herefordshire Council, the Worcestershire Way, the Three Choirs Way and the Geopark Way.

There is a good spread of different sizes of accessible natural green space assets across the district and the presence of the Malvern Hills AONB along the western edge of the district provides good access to larger assets. A 2018 visitor survey of the Malvern Hills and Commons<sup>3</sup> provides a useful set of data on the access and recreational usage of this part of the district at that time.

## 2.2 Accessible Land

As the analysis above demonstrates, there is an uneven spread of assets in the county. This section considers the proximity of these assets to communities in Worcestershire.

The provision of accessible green space as part of a green infrastructure network significantly contributes to creating places where people want to live and work. It has been evidenced that proximity to good-quality green space has an important influence on the health and wellbeing of local populations, through contributing to their physical activity levels, supporting good mental health and positively impacting on air quality<sup>4</sup>.

The map at Figure 3 is based on the 'Access Network Map' data produced by Natural England to inform work which aims to improve opportunities for people to enjoy the natural environment. It portrays the distribution of land accessible for recreation in Worcestershire based on linear distances on foot from communities represented on the map by Lower Super Output Areas (LSOAs)<sup>5</sup>. Communities with the best access to green spaces are represented in dark green, whilst those with the worst are represented in red. Using LSOAs allows for a spatial analysis of the density and accessibility of green spaces in relation to where people live. It also allows this information to be compared against other factors, such as deprivation levels, which also use this geographic hierarchy (see Chapter 5: The socio-economic benefits of green spaces).

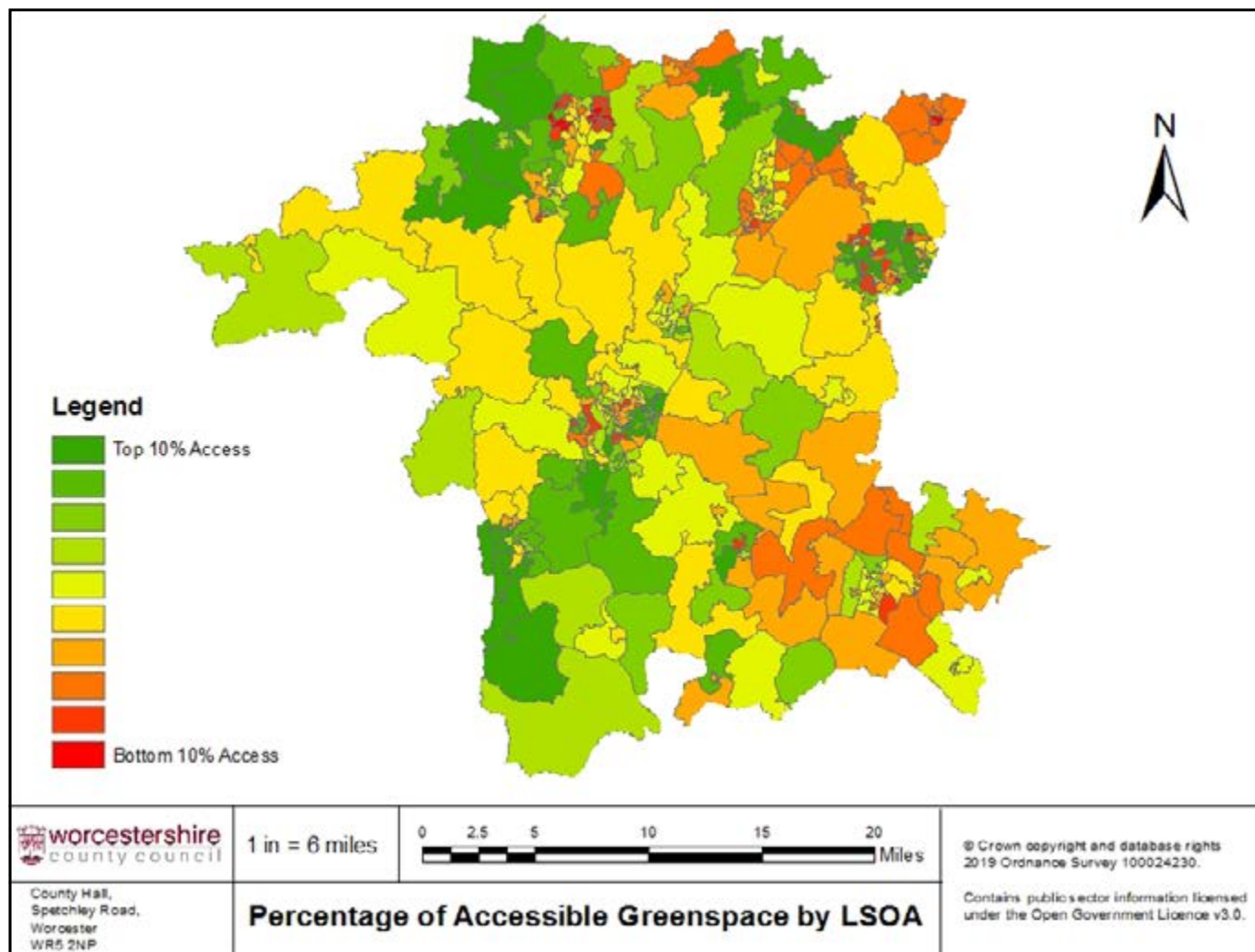
3 [https://www.malvernhillsaonb.org.uk/wp-content/uploads/2019/03/Malvern-Hills-Commons-Visitor-Survey-2018\\_Final-Report.pdf](https://www.malvernhillsaonb.org.uk/wp-content/uploads/2019/03/Malvern-Hills-Commons-Visitor-Survey-2018_Final-Report.pdf)

4 Public Health England (2014) Local action on health inequalities: Improving access to green spaces

5 Lower Layer Super Output Areas are a geographic hierarchy designed for the reporting of small area statistics in England and Wales.

The map illustrates that the distribution of land accessible for recreation in Worcestershire is uneven. The south-east and north-east have reduced accessibility in comparison with other areas of the county. There are also pockets of significantly poor accessibility in some urban areas of Worcestershire including Kidderminster, Worcester City and Redditch. It needs to be noted, however, that accessibility in urban areas is likely to be underrepresented due to the lack of consistent data on accessible parks and gardens.

**Figure 3 - Percentage of land accessible for recreation by Lower Super Output Area in Worcestershire**



### 2.3 Accessible Woodland

There are a number of other standards by which access to natural green space can be measured. A 2017 Woodland Trust report<sup>6</sup> states that access to woodland can make people physically healthier, improve mental wellbeing and increase quality of life. It also demonstrates that the closer green spaces are to where people live, the more likely people are to use them. To analyse access to woodlands, the Woodland Trust uses the Woodland Access Standard, which has the following aims:

- That no person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size; and
- There should also be at least one area of accessible woodland of no less than 20ha within 4km (8km round trip) of people’s homes.

The Woodland Trust used the Woodland Access Standard to analyse the level of access people in the UK have to woodland close to their homes<sup>7</sup>.

6 Woodland Trust (2017) Space for people – targeting action for woodland access.

7 Woodland Trust (2017) Space for people – targeting action for woodland access.

The results for Worcestershire are:

**Table 1: Woodland Access Standard (2017) in Worcestershire**

	Standard	Worcestershire	England
<b>Accessible woods</b>	Percentage of population with access to a 2ha+ woodland within 500m	14.8	18
	Percentage of population with access to a 20ha+ woodland within 4km	69.9	67.9
<b>Inaccessible woods</b>	Percentage of extra population with access to a 2ha+ wood within 500m if existing woods opened	45.3	33.6
	Percentage of extra population with access to a 20ha+ wood within 4km if existing woods opened	25.6	20.3
<b>Woodland creation</b>	Percentage of population requiring new woodland to be able access a 2ha+ wood within 500m	40	48.3
	Percentage of population requiring new woodland to be able to access a 20ha+ wood within 4km	4.8	11.8

Although this analysis is restricted to woodland, it further illustrates that there is a deficit of informal recreation sites in the county. It also highlights the opportunity to increase recreational opportunity in existing woodlands.

## 3. Multifunctionality of green spaces

### 3.1 Delivering GI functions

The concept of multi-functionality is key to green infrastructure. One way in which this can be expressed is through the ecosystems services approach<sup>8</sup>. Recreation is customarily classed as a cultural service, providing opportunities for physical exercise, spiritual development, cognitive development and aesthetic enjoyment. However, sites also provide a range of other ecosystems functions. The functions provided vary between sites, dependent on their size, habitats, location and connections to other areas of GI importance. The following chart outlines the ecosystem services provided by four different GI recreation assets serving Worcestershire residents.

**Table 2: Ecosystem services provided by a sample of key green infrastructure assets in Worcestershire**

Site	Site Description	Ecosystem Services			
		Provisioning	Regulating	Cultural	Supporting
<b>Lickey Hills</b>	Country park; woodland and heathland.	Wood fuel, timber, biodiversity, genetic resources <sup>9</sup>	Air quality, pollination, pollution buffering	Spiritual enrichment, cognitive development, reflection, recreation, aesthetic enjoyment	Soil formation, photosynthesis primary production, nutrient cycling, water cycling
<b>Arrow Valley Country Park</b>	Country park; river, woodland and grassland	Wood fuel, timber, biodiversity, genetic resources	Air quality, pollination, pollution buffering, flooding, erosion	Spiritual enrichment, cognitive development, reflection, recreation, aesthetic enjoyment	Soil formation, photosynthesis primary production, nutrient cycling, water cycling
<b>Worcester and Birmingham Canal</b>	Canal; linear water feature	Biodiversity, genetic resources	Climate and flood regulation	Spiritual enrichment, cognitive development, reflection, recreation, aesthetic enjoyment	Water cycling
<b>Regional cycle route 55</b>	On- and off-road cycle route	Biodiversity (off road, green route)		Spiritual enrichment, cognitive development, reflection, recreation, aesthetic enjoyment	Photosynthesis

<sup>8</sup> Ecosystems services are the benefits that a healthy environment provides for people either directly or indirectly. Four categories of ecosystem services are customarily recognised: provisioning, regulating, cultural and supporting.

<sup>9</sup> Genetic resources are native species of plants and animals which hold special characteristics which were sustained with quality, endurance against diseases and pests, species that use nutrients effectively and that have adapted to climate conditions. The goal is to preserve the material to stop the loss of this genetic diversity.

Whilst a systematic assessment of natural capital has not been undertaken on these sites, it can be assumed that due to their nature, they are likely to generate various degrees of positive impacts on green infrastructure through ecosystem services, by providing benefits such as improving air quality, opportunities for outdoor recreation, climate change mitigation and environmental enhancements. See Appendix 1 for an in-depth description of ecosystem services and natural capital approaches.

### 3.2 Interactions between GI functions

The quality of the urban and rural environment is the greatest attraction for many people who participate in access and recreation. Whilst there are great synergies between natural green spaces and their access and recreation functions, the recreational use of some sites needs to be carefully managed to preserve the quality of their habitats. Increasing levels of recreation and visitor pressure produce environmental impacts such as soil erosion and compaction, damage to vegetation, disturbance to wildlife, water pollution, vandalism and noise. These impacts can be minimised through the careful consideration of where visitors should be allowed, and which areas need to be left as undisturbed as possible. This can be achieved by separating the areas of importance and directing movement with suitable paths, gates and meeting points. Visitors can be still allowed to enjoy the scenery and nature, but at a safe distance. Information boards can also be used to make visitors aware of the importance of nature protection and to inform people of how they should behave and which routes they should take to enjoy their visit, whilst causing the minimum disturbance to the environment.

#### Avon Meadows



The Avon Meadows Community Wetland was established in 2008 by Pershore Town Council and Wychavon District Council and is supported by a local volunteer group. It comprises an area of 24 hectares beside the River Avon which is only a 5 minute walk from the town centre. Originally water meadows, a series of flooded scrapes have been created as a haven for wildlife. The wetland performs an important function as it takes surface water from the nearby housing estate and provides a natural means of improving the water quality before it enters the river.

There are numerous footpaths in the area. A boardwalk runs through the middle of the wetland so that visitors can access the site easily and get up close to the wildlife. The clearly defined walkaways also keep residents away from the more biodiversity sensitive areas.

## 4. Capacity and accessibility of recreation sites

There are many different ways in which the carrying capacity of a site can be explored, including visitor perception, number of visitors and environmental designations.

### 4.1 Visitor Numbers

Table 3 below contains current estimates of visitor numbers for major Worcestershire recreation sites:

**Table 3: Approximate annual number of visitors to major recreation sites in Worcestershire<sup>10</sup>**

Site	Numbers per year
Malvern Hills	>1,250,000
Worcester Woods Country Park	600,000
Clent Hills	500,000
Lickey Hills Country Park	500,000
Waseley Hills Country Park	300,000
Kinver Edge	250,000
Wyre Forest Visitor Centre	200,000
Hartlebury Common	200,000

The accuracy of visitor number information varies on a site-by-site basis, depending on how the information was calculated and the spread of visitors through the site, throughout the day and the year. For example, there are multiple access points to the Wyre Forest and a number of car parks. Using the numbers from the visitor centre provides a guide to visitor numbers but is not definitive. Conversely, although there are a number of pedestrian access points to Waseley Hills Country Park, there is a single car park and, as a smaller site, it is easier to assess visitor numbers.

<sup>10</sup> These numbers are estimates at the time of writing this report, based on information from site managers. This information was obtained from internal communications with the Countryside Team at Worcestershire County Council.

## Worcester Woods Country Park



Worcester Woods Country Park is a Green Flag Award-winning site on the eastern edge of the city of Worcester. Made up of several farms within what was a very rural landscape, it is now surrounded by urban development including office blocks, Worcestershire Royal Hospital and new housing developments. It is incredibly popular, as it is the only country park within the city, with over 600,000 visits per year. Visitor facilities such as the café and play areas have been improved over the past 10 years to increase visitor numbers and to enhance the profile of the site. The site consists of ancient semi-natural woodland (Nunnery Wood) and species-rich meadows (Hornhill Meadows), both of which are Local Nature Reserves and Local Wildlife Sites. Its habitats are becoming increasingly sensitive to the impact of visitor numbers and the site is now at capacity. A number of practical methods have been used to minimise visitor pressure on the site, including installation of cleft chestnut fencing within Nunnery Wood to direct visitors and encourage them to stay on the main surfaced paths. Signage and interpretation about the habitats also helps to raise awareness of their sensitivity.

### 4.2 Visitors and their needs

Recreation assets experience different types of visitors who use these sites for different types of activities. They include:

- National and international tourists who are likely to visit nationally recognised sites such as the Malvern Hills;
- Local residents visiting local sites for recreation;
- Residents using sites on an everyday basis for activities such as dog walking;
- Tourists and local people using recreation assets for sport-related activities such as cycling, horse riding, sailing, etc.; and
- Families with children using sites for recreation.



### 4.3 Carrying capacity

As demonstrated above, many Worcestershire recreation assets experience high numbers of visitors which will increase as a result of future development and population growth (see Chapter 6, Future opportunities). Whilst this trend may be positive from a socio-economic point of view (see Chapter 5, The socio-economic benefits of green spaces), it can create challenges for sites to absorb these increased pressures. The main aspect that can be negatively affected by increased recreational pressure is the quality of the natural environment, including habitats and wildlife.

Discussions with the Countryside Services team at Worcestershire County Council and information provided by the site managers allowed the identification of major sites in Worcestershire that are at or over capacity, and those where there may be opportunities to increase capacity through appropriate site management. These sites are represented in Table 4 and Table 5 below.

**Table 4: Major Worcestershire sites currently at or over capacity**

Site	Location by district
The Malvern Hills	Malvern Hills
The Wyre Forest	Wyre Forest
Worcester Woods Country Park	Worcester City
Clent Hills	Bromsgrove
Lickey Hills	Bromsgrove
Wyre Forest Heathlands	Wyre Forest
Hartlebury Common	Wychavon
Kinver Edge	Worcestershire/Staffordshire
Bredon Hill	Wychavon
Kempsey Common	Wychavon
St Wulstan's Nature Reserve	Malvern Hills
Shrawley Wood	Malvern Hills

**Table 5: Major Worcestershire sites at or near capacity but which may have the opportunity to increase capacity through management**

Site	Location
Ribbesford Wood	Wyre Forest
Arley Wood and Coldridge Wood	Wyre Forest
Waseley Hills Country Park	Bromsgrove
Worcester Riverside	Worcester City
Blackstone Riverside Park	Wyre Forest
Stourport Riverside Meadows	Wyre Forest
Arrow Valley Country Park	Redditch
Evesham Battlefield	Evesham

The majority of sites which are at or over capacity are in the centre and north of the county, closest to the greatest population centres. The Malvern Hills are also thought to be under considerable recreational pressure, with over one million visits per year. The Malvern Hills are a recreational asset not only for Worcestershire, but also for the wider region and beyond. As such they attract visitors from a wide area, contributing to the significant recreational pressure but also to the local tourist economy.

Those sites which have capacity to absorb greater visitor numbers, either through changes in management or because they are under-utilised, tend to be in the west or south of the county. These sites are more remote from the main centres of population, and residents will have to travel a greater distance or travel for longer to visit them due to the quality of roads or their poor accessibility. It may also be that the sites' recreational offer is more limited or not as appealing as nearer sites, which again will reduce their attractiveness to the majority of visitors.

Many smaller access and recreation sites in Worcestershire, particularly those around urban areas, are at capacity from routine access and recreation such as dog walking. This is due to increased housing growth and the increased popularity of Worcestershire as a place to live because of the quality of its environment.

#### 4.4 Factors impacting the capacity of recreation assets

There are several factors that affect the carrying capacity of recreation assets in Worcestershire, such as the type and quality of natural habitats on the site, the nature of the recreational activity and visitor numbers.

##### Site habitats and species

The resistance of a habitat to visitor pressure is determined by its resilience, management techniques and the nature of the recreational use. For example, grassland and heathland habitats have low resilience to visitor pressure, as they are easily damaged by trampling, erosion, etc., which can result in changes to the composition and structure of vegetation in affected areas. Woodlands, by comparison, are much more resilient habitats although ground flora and regeneration can both be easily damaged by visitors, in particular where they do not stay on defined paths<sup>11</sup>.

The effects of recreational pressure can be exacerbated by seasonality and the type of recreation. For example, horse riding and cycling can both damage grassland habitats and increase areas of bare ground or unsurfaced paths. This is exacerbated in wet conditions where the ground can become rutted and compacted, making it difficult for vegetation to re-establish.

<sup>11</sup> Natural England, "Access and Nature Conservation Reconciliation, Supplementary Guidance for England", 2009.

Improvements to and management of recreation sites to make them fit for use by a large number of visitors can also have a detrimental impact on species and their habitats. Recreation areas require lighting to ensure public safety, which can impact on living environments and foraging routes for species such as bats. Additionally, increasing footfall in habitats such as woodland and grassland may have an adverse impact on wildlife such as breeding birds, small mammals, reptiles and amphibians.

## Worcester Riverside Walk and Diglis Bridge



Photo: Lindsay Fowke & solareye80

In 2010, Sustrans, in partnership with Worcestershire County Council and Worcester City Council, completed the development of Diglis Bridge over the River Severn in Worcester, linking it with the wider riverside walk. The project created a series of new and improved walking and cycling routes which lead to a new non-vehicular crossing over the River Severn linking into national cycle networks. This created a high-quality riverside informal recreation asset.

It was subsequently discovered that horseshoe bats had a roost near Worcester Cathedral alongside the River Severn. Further monitoring found that the new lighting installed there, which consisted of thigh high bollards that provided a strong upward illumination, posed a barrier to the bats leaving their roost to access the river's embankments.

In 2016, approximately 40 bat-friendly solar-powered LED light studs were installed along a 60m river stretch. The lights created a setting suitable for nocturnal animals whilst providing a safe and attractive environment for people. Since the lighting scheme has been modified, a generally positive population trend for horseshoe bats, alongside a wealth of other bats has been noticed.

### Designated sites

Sites with natural or historic environment designations (such as Sites of Special Scientific Interest, Local Geological Sites, Scheduled Monuments, and Registered Parks and Gardens, and Battlefields.) are often home to sensitive species and habitats. Such sites are more likely to have a lower carrying capacity for informal recreation, as too many visitors may adversely impact the designation or the quality of the asset. This also applies to non-designated sites which are valuable from a natural and/or historic environment point of view.

### Soil resilience

Soil erosion rates are determined by a number of factors, including water and wind. Recreation can exacerbate the rate of erosion through trampling, resulting in bare earth which is more prone to erosion through the action of wind and water. Vulnerable habitats on erosion-prone or thin soils are more likely to be damaged by recreation.

### Perception of visitor pressure

The perception of visitor pressure can be influenced by a number of factors, including habitats, terrain, size, parking provision, etc. Sites which appear to have a low ability to cope with large numbers of visitors include flat grassland sites, whereas woodlands of varying terrain appear to be able to cope with a greater number of visitors. This appears to be related to our ability to see large numbers of visitors, versus the feeling of being alone; some habitats and sites are better able to absorb visitors and create the feeling of being quiet and isolated<sup>12</sup>.

### Recreational Use

Perhaps one of the greatest influences on the recreational carrying capacity of a site and its perceived and actual ability to absorb visitors, is the nature of the recreational activity. Activities such as horse riding, cycling, and dog walking have a greater impact on site infrastructure, with higher maintenance requirements and more visual intrusion, than lower-impact activities such as walking, bird watching, etc. This effect is exacerbated by activities such as BMX scrambling, for which informal tracks can sometimes be created which alter the look and feel of the recreational site. Most mechanised forms of recreation are seen as highly intrusive and are often in conflict with informal recreational environments.

The effects of water-based recreation are more difficult to determine, particularly with regard to perception and visual intrusion. Activities such as canoeing and sailing have a potentially lower impact on the environment and the water body. However, motorised boat traffic can cause damage to biodiversity and habitats through increasing the turbidity of the water, increasing bankside erosion through backwash, pollution of the water and air through discharges and exhaust fumes. The biosecurity of individual waterbodies also needs to be given high priority, as water-borne diseases (e.g. crayfish plague) and non-native species (e.g. so called 'killer shrimp' *Dikerogammarus villosus*) can be spread from one to another by footwear and clothing, vehicle tyres, dogs, boats and other recreational equipment.

## 4.5 Site capacity improvements

There are some practical solutions that can be used to reduce the impact of visitor numbers to sensitive sites with little impact on the quality of the recreational experience:

- Appropriate surfacing of walking routes and trails will encourage visitors to stay on designated routes rather than wander into more sensitive areas.
- Creating barriers such as informal fencing and brash will channel visitors through more sensitive habitats such as ancient woodland to reduce the impact that the footfall may have on the quality of these habitats.
- Adding or improving signage and interpretation to enable visitors to access appropriate parts of sites and discourage them from using more sensitive areas.

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12 Natural England, "Access and Nature Conservation Reconciliation, Supplementary Guidance for England", 2009

Further work needs to be undertaken with site managers to assess the impact of recreation on sites, and to judge the capacity of sites to cope with increased demand through management, etc.

## 4.6 The quality of recreation sites

The quality of recreational sites impacts on how well they are used and how they are perceived. The quality of these sites can be determined by a number of factors such as the quality of the environment, how well they are managed and whether they are safe and accessible for all.

In 1997, the importance of the quality of green spaces was recognised by key experts<sup>13</sup> with a shared interest in promoting natural green spaces, who set up the Green Flag award. The award is an internationally recognised accreditation scheme that rewards well-managed parks and green spaces.

Parks and green spaces are judged against eight key criteria<sup>14</sup>:

### **A welcoming place**

This means creating a space which, through its visual appearance, range of facilities, standards of maintenance and ease of access, makes people feel that they are in a cared-for place that is welcoming, has good and safe access, signage and considers equal access for all.

### **Healthy, safe and secure**

This criterion looks at how well managers understand their users' needs, encouraging them to enjoy healthy activities using appropriate, safe-to-use facilities and activities, and to feel personally safe and secure, including appropriate provision of quality facilities and activities, safe equipment and facilities, personal security and control of dogs/dog fouling.

### **Well maintained and clean**

For aesthetic as well as health and safety reasons, issues of cleanliness and maintenance should be addressed, in particular:

- litter and other waste management issues must be adequately dealt with;
- grounds, buildings, equipment and other features must be well maintained; and
- policies on litter, vandalism and maintenance should be in place, in practice, and regularly reviewed.

### **Environmental management**

This seeks to ensure that the way the site is managed has a positive impact on the environment. Where choices can be made for future procurement, landscaping or buildings, they should aim to minimise energy and resource consumption and waste, and design-in benefits to the local and global environment.

### **Biodiversity, landscape and heritage**

Attention should be paid to the appropriate management and conservation of natural features, wildlife and flora; landscape features; and buildings and structures. Their particular character and requirements should be identified and appropriate management strategies put in place to conserve and enhance them.

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13 The scheme was directed by a Steering Group made up of individuals and representatives of larger organisations, including the Pesticides Action Network UK, The Institute of Leisure and Amenity Management, The Chartered Institution of Water and Environmental Management, KMC Consultancy and English Nature.

14 Green Flag Award website <http://www.greenflagaward.org.uk/>

### **Community Involvement**

This criterion considers the extent to which the managing organisation understands the community it seeks to serve and provides opportunities for active participation in site projects. There should be appropriate provision of recreational facilities and activities for all sectors of the community.

### **Marketing and communication**

This criterion seeks to examine the ways that managers understand the key benefits of the site and how they use this information to promote it appropriately to existing and potential user groups using a fitting range of interpretation and engagement techniques to communicate with them.

### **Management**

This criterion evaluates how well the management plan is implemented on a recreation site.

There are over 2,000 Green Flag Award-winning sites around the world and the award is open to any free-to-enter park or green space including formal parks, country parks, nature reserves, woodlands, cemeteries, botanic and historic gardens, and university campuses.

In Worcestershire, the County Council has three Green Flag award-winning sites (Worcester Woods Country Park, Waseley Hills Country Park in Rubery and St. Wulstan's Local Nature Reserve) and manages its other countryside sites to Green Flag Award standards, even if they do not have the award itself. Similarly, most of the District Councils in Worcestershire secure Green Flag Awards for a number of their formal parks and green spaces each year.

## 5. The socio-economic benefits of green spaces

Access and recreation plays a key role in the continued social, environmental and economic well-being of the county. The natural environment and recreation opportunities can contribute to job creation and to the economic performance of the county through encouraging resident and visitor spending in the areas surrounding recreation sites. Recent statistics show that over 16 million tourist trips are made to Worcestershire every year<sup>15</sup>. The 2017 visitor surveys co-ordinated by Visit Worcestershire and the Worcestershire Local Enterprise Partnership identified that people from outside of county are most likely to visit Worcestershire for its countryside (22%) and waterways (13%)<sup>16</sup>.

There is a strong link between the provision of accessible and good-quality green spaces and improved health of residents. The provision of recreational assets is a contributing factor in promoting and supporting health and wellbeing in Worcestershire, creating opportunities for walking, cycling, taking part in other sports and enhancing people's exposure to nature and clean air. Recreational assets can reduce the incidence of several conditions associated with low physical activity, such as obesity and diabetes. They can also positively contribute to people's mental health and general wellbeing. The use of green spaces, including outdoor recreation sites, can facilitate social connections, as people are inclined to go outdoors and therefore have contact with each other, increasing the likelihood of social interaction<sup>17</sup>.

A more detailed analysis of the health benefits of green infrastructure is provided in Framework Document 4 (Socio-Economic Impacts of Green Infrastructure).

### 5.1 Worcestershire's Economy

Worcestershire's economy is generally performing well but this not reflected in all economic measures. In 2018, Worcestershire's annual growth was 5%, which was higher than the averages for both the West Midlands (4.4%) and England (4.3%). The highest economic growth was in Bromsgrove and the lowest was in Redditch. Gross Value Added (GVA) per hour worked in Worcestershire in 2016 was £29.40 compared with £28.30 in the West Midlands and £33.10 in England.

Economic inactivity measures the number and proportion of the population that are not in employment. The measure includes students, those engaged in unpaid caring activity (e.g. full-time parents), people who cannot work due to long-term sickness or disability and retired people, in addition to those who are seeking work or who do not wish to work. In Worcestershire an estimated 21% of the population aged 16-64 are classed as economically inactive, similar to England and lower than in the West Midlands<sup>18</sup>.

15 Destination Worcestershire (2015) Economic Impact of Tourism, produced by The Research Solution

16 Worcestershire County Council's website, 'County in tourist boom' online news item" [http://www.worcestershire.gov.uk/news/article/1258/county\\_in\\_tourism\\_boom](http://www.worcestershire.gov.uk/news/article/1258/county_in_tourism_boom)

17 University of Essex (2015) Wellbeing benefits from natural environments rich in wildlife

18 Worcestershire County Council, Worcestershire Local Economic Assessment 2018

## Malvern Hills and Commons



The Malvern Hills and Commons rise above the Severn Plain on the border of Herefordshire and Worcestershire. Full of cultural heritage and home to a wide range of species and habitats, the landscape is protected and managed for the benefit of the local community and the hundreds of thousands of visitors who come each year. There are over 1,200 hectares of hilltop, woodland and open common. The Malvern Hills Acts grant open access to walkers and horse riders across the Hills and Commons. Footpaths and permissive paths crisscross the landscape as well as wide Victorian drives and old drover's tracks. For cyclists and horse riders there is a network of over 56km of bridleways, whilst some permissive cycle paths have been created by the Malvern Hills Trust.

The Malvern Hills have attracted visitors for many years, with the Victorians promoting the local springs for their purity and healing properties. Such cultural associations and the dramatic landscape of the hills brings tourists for day and overnight visits, making an important contribution to the local economy. The greatest range and pressure of visitor use is largely restricted to the 12 square kilometres of the northern and central Malvern Hills, reflecting the dramatic beauty and accessibility of this area.

## 5.2 Health and wellbeing

Key issues facing Worcestershire which can be influenced by access to all forms of green spaces and recreation opportunities include:

- Increasing health inequalities<sup>19</sup>;
- Poor air quality; and
- Increasing excess weight in adults<sup>20</sup>.

19 Health inequalities are avoidable and unfair differences in health status between groups of people or communities. Variation in the experience of wider determinants of health (social inequalities) is considered the fundamental cause of health inequalities. They determine the extent to which different individuals have the physical, social and personal resources to identify and achieve goals, meet their needs and deal with changes to their circumstances.

20 The Marmot Review, Fair Society, Healthy Lives <http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf>



Compared to England, Worcestershire performs well on many measures of health and wellbeing. Life expectancy, an overarching indicator, is higher than the England average for both females and males, and deaths from causes considered preventable are significantly lower in Worcestershire than in England. This does, however, mask underlying differences in outcomes between the most and the least affluent residents in Worcestershire<sup>21</sup>. The difference in life expectancy between the most deprived and most affluent areas was 7.7 years for men and 5.4 years for women. There is an even higher disparity in the number of years people spend in good health, which was 15.4 years and 14.3 years for men and women respectively<sup>22</sup>.

Although this paper primarily considers informal access and recreation, the commentary on health and wellbeing below applies equally to all forms of green space including formal parks and open spaces where communities and individuals have access to recreation in the open air.

### 5.3 Deprivation

As noted above, deprivation increases the risk of poor health and is generally described as a relative disadvantage in terms of material and social factors (which can include money, resources and access to life opportunities).

There is a strong association between income and health, with many health outcomes improving incrementally as income rises. Employment is one of the most important determinants of physical and mental health. The long-term unemployed have a lower life expectancy and worse health than those in work. Unemployment does not just affect individuals, as lack of income may influence a child's early development and educational opportunities, which in turn can affect their future employment opportunities and income<sup>23</sup>. The Indices of Multiple Deprivation cover a range of socio-economic measures which are combined to form the indices used to indicate the relative level of deprivation in an area based on a national ranking.

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21 Worcestershire County Council, Joint Strategic Needs Assessment Annual Summary 2019

22 Worcestershire County Council, Inequalities in Health in Worcestershire, Worcestershire Public Health Annual Report 2014

23 Worcestershire County Council, Joint Strategic Needs Assessment Annual Summary 2019

## St Wulstan's Nature Reserve



St. Wulstan's Local Nature Reserve is a tranquil and biodiverse site on the edge of Malvern Wells. It benefits from views of the Malvern Hills whilst being only three miles away from Malvern town centre. The Reserve covers over 22 hectares and encompasses a network of habitats including flower-rich meadows, woodland and parkland areas with specimen trees. The site has been awarded Green Flag status for a number of years in recognition of its quality of management and community involvement. In a link to its past as a hospital, the site offers significant health and wellbeing benefits, often being signposted by doctors and physiotherapists for people recuperating from illness due to its flat and accessible nature, with waymarked trails.

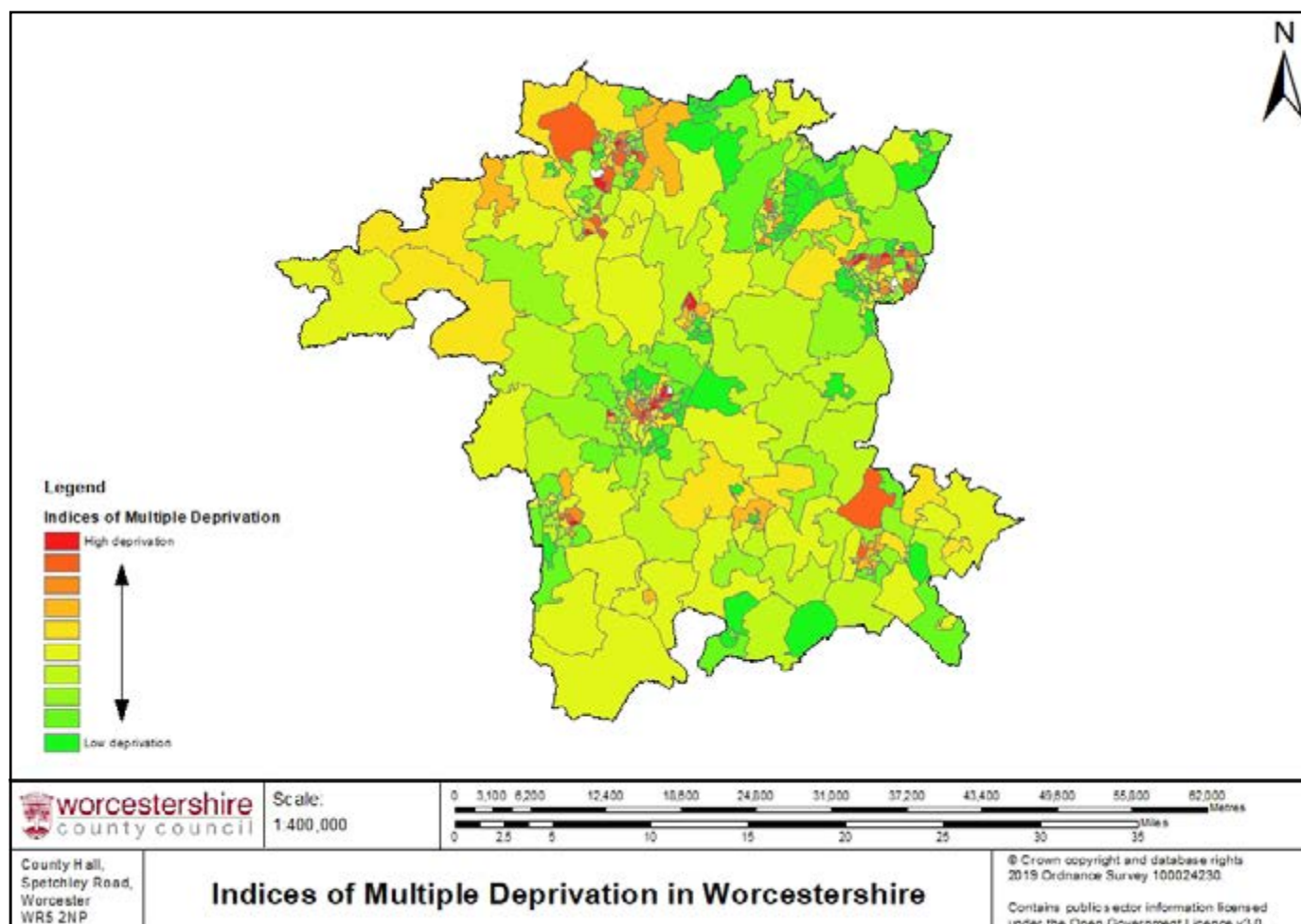
Access to quality green infrastructure will primarily contribute to addressing the health factors within the indices but also economic indicators which are linked to health inequalities. The most significant benefits from GI have been seen in the following categories:

- Increased life expectancy and reduced health inequality;
- Improvements in levels of physical activity and health;
- Promotion of physical health and mental wellbeing;
- Increases in economic factors including household income and employment rates;
- Improved education, skills and training; and
- Improvements to air quality and reductions in road traffic accidents.

Proximity to green space is generally associated with increased levels of physical activity. Regular participation in physical activities has been shown to improve physical and mental health<sup>24</sup>. In addition, green infrastructure can make a positive contribution to improving the quality of the built environment, in particular through addressing air quality issues. Trees and woodland habitats reduce the concentration of some airborne particulates which contribute to poor air quality, including ozone and nitrogen dioxide.

Figure 4 illustrates the indices of deprivation in Worcestershire. The county has small pockets of significant deprivation in Redditch, Kidderminster, Droitwich, Worcester and Great Malvern. Some areas within and north of Evesham have also been identified as having quite high levels of deprivation.

**Figure 4: Indices of Multiple Deprivation in Worcestershire**



In areas with substantial levels of deprivation, where access to private transport and disposable income to visit natural green space will be much reduced, proximity and easy access to recreational sites (for example through use of public transport) is vitally important.

Figure 2 illustrates the distribution of land accessible for recreation by Lower Super Output Area in Worcestershire (see Section 2.2 Accessible Land). On the whole, the spatial analysis of green space accessibility and deprivation levels does not seem to show a direct link between these two elements. Whilst there is some overlap between poor accessibility and high deprivation levels in the county, such as in the area north of the A4184 stretching between Norton, Harvington and Lower Moor, there are also contradicting examples such as the area north-west of Kidderminster which has high levels of both accessibility and deprivation.

## 5.4 Access for all

In order to address some of the socio-economic issues mentioned above, it is important that recreation and access sites offer opportunities for all community members. Whilst there will be some limitation due to the type or location of recreation sites, inclusivity should be the key consideration in creating and managing the sites. Key components of accessibility and inclusion within the context of recreation opportunities include:

- Accessibility of sites by public transport, walking and cycling to ensure that they are not limited to car owners;
- Ensuring that sites are free at the point of entry, to allow access and encourage the participation of people from all economic backgrounds;
- Making provision for disabled and less-able people;
- Appealing to as many groups of the population as possible. Whilst it is impossible for each site to cater for everyone, measures can be taken to appeal to a variety of groups. This might include, for example, provision of children's nature trails to appeal to young families and children; off-road cycling tracks for older children and adults; and information boards and clear signage.
- Worcestershire's population is ageing but, whilst people generally live longer, more people are developing long-term conditions including dementia. Recreational sites should ensure that they cater for the elderly and people living with dementia by providing seating areas, clear signage, toilets, and circular, easy-to-navigate routes.

### Leapgate Old Railway Line



Leapgate Old Railway Line runs from the heart of Stourport-on-Severn for nearly three miles to the village of Hartlebury, travelling from urban to rural, over a superb viaduct on the River Stour, then into a deep cutting and out into farmland. There are several Victorian bridge structures along its length. The surface is flat and with good access along it at several points, offering opportunities for wheelchair users, buggies, cyclists and horse riders. It forms part of Sustrans route 45.

## 6. Future opportunities

### 6.1 Future growth

The population of Worcestershire in 2019 was 592,130 people. By 2030 the population is projected to increase by 28,641, or 4.8%<sup>25</sup>. Worcestershire has an ageing population and this trend is projected to continue. In future years there is expected to be a large increase in the number of older people, notably the very oldest age groups, whilst those in the 20-24 age group are likely to decrease<sup>26</sup>. Worcester City is an exception as it has larger numbers of young people.

45,600 new homes are planned for the county by 2030 and it is estimated that this number may increase by 14,400, amounting to approximately 60,000 homes in total. Figure 5 illustrates the distribution of future development in Worcestershire mapped against recreation provision. Growth has been proposed around the majority of the county's urban areas, in particular Worcester, Kidderminster, Bromsgrove and the fringes of Redditch. Worcestershire Parkway, Throckmorton Airfield, Rushwick, and the north-east of Wyre Forest district are likely to be the focus of strategic development. Some growth is also proposed on the boundary between Wychavon and Tewkesbury districts. This growth could have a considerable impact on sites that are already under recreational pressure, but it also offers opportunities for the creation of new recreational assets in Worcestershire.

### 6.2 Impacts on recreation sites

The majority of large green infrastructure assets in Worcestershire are near, at or over capacity for recreation. There may be good reasons for not wanting to attract further visitors to particular parts of a site, for example to protect the natural or historic environment, to retain quiet areas of tranquillity, or to set aside areas for major events or more intrusive sports.

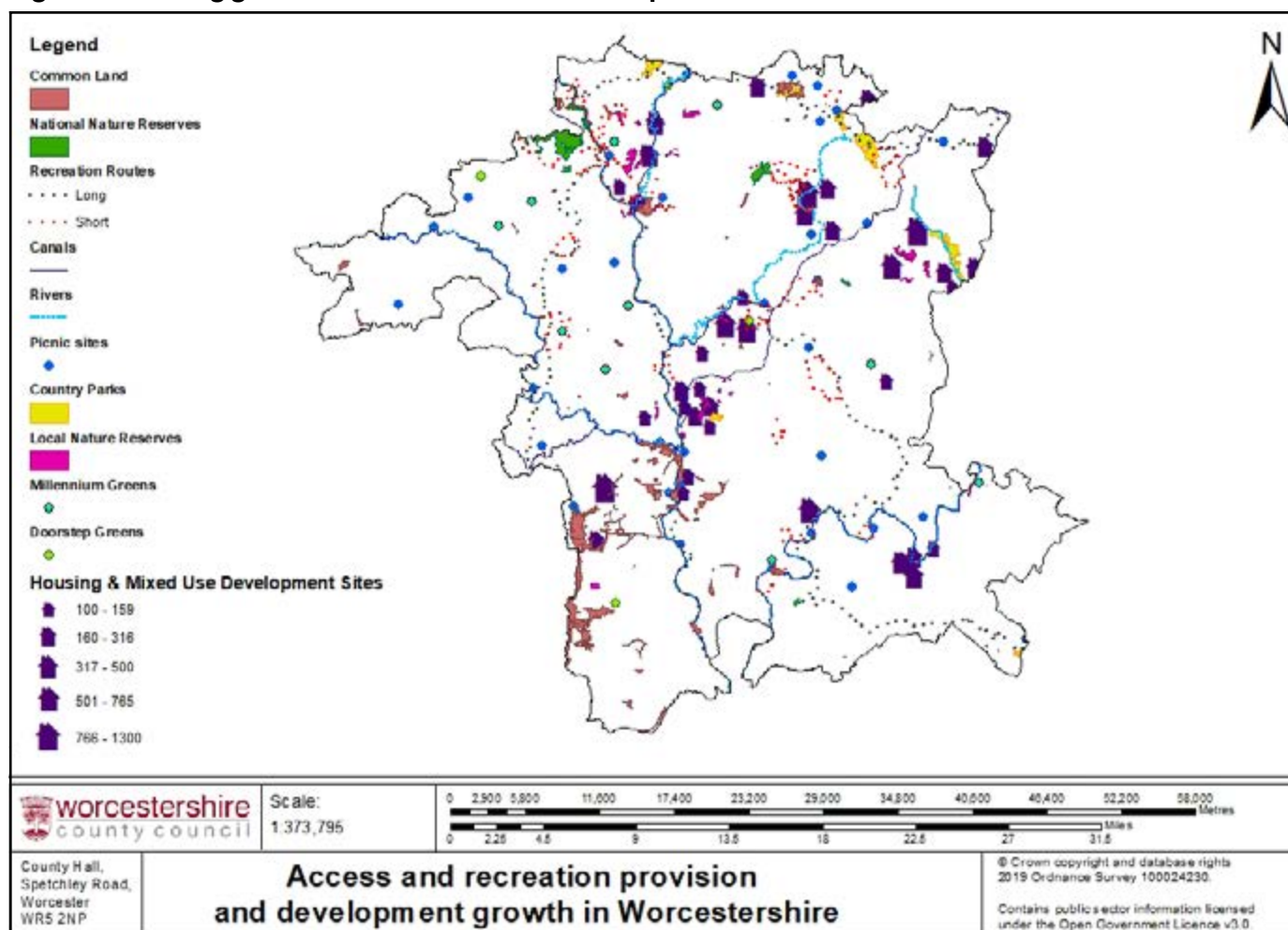
### 6.3 Opportunities offered by development

Whilst future housing growth is associated with increased pressures on existing assets, it also offers the potential for financial contributions towards existing assets and the creation of new ones through developer contributions as well as the allocation of land for green infrastructure within developments. This approach is likely to create several smaller recreation sites serving new and existing residents. Careful planning should ensure that these green spaces are interconnected.

The change in demographics could impact on the type and management of recreation sites promoted in the future. The ageing population will necessitate an increased focus on the accessibility of sites in terms of transport, site management and inclusivity. Whilst large, county-level sites will always be important, demographic changes may require additional focus on smaller, inter-connected neighbourhood-level green spaces which may be able to meet users' requirements more easily.

25 [http://www.worcestershire.gov.uk/info/20044/research/795/population\\_statistics\\_and\\_projections](http://www.worcestershire.gov.uk/info/20044/research/795/population_statistics_and_projections)

26 Population statistics taken from the Office for National Statistics available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>

**Figure 5: Housing growth and access and recreation provision in Worcestershire**

## 6.4 Minerals restoration

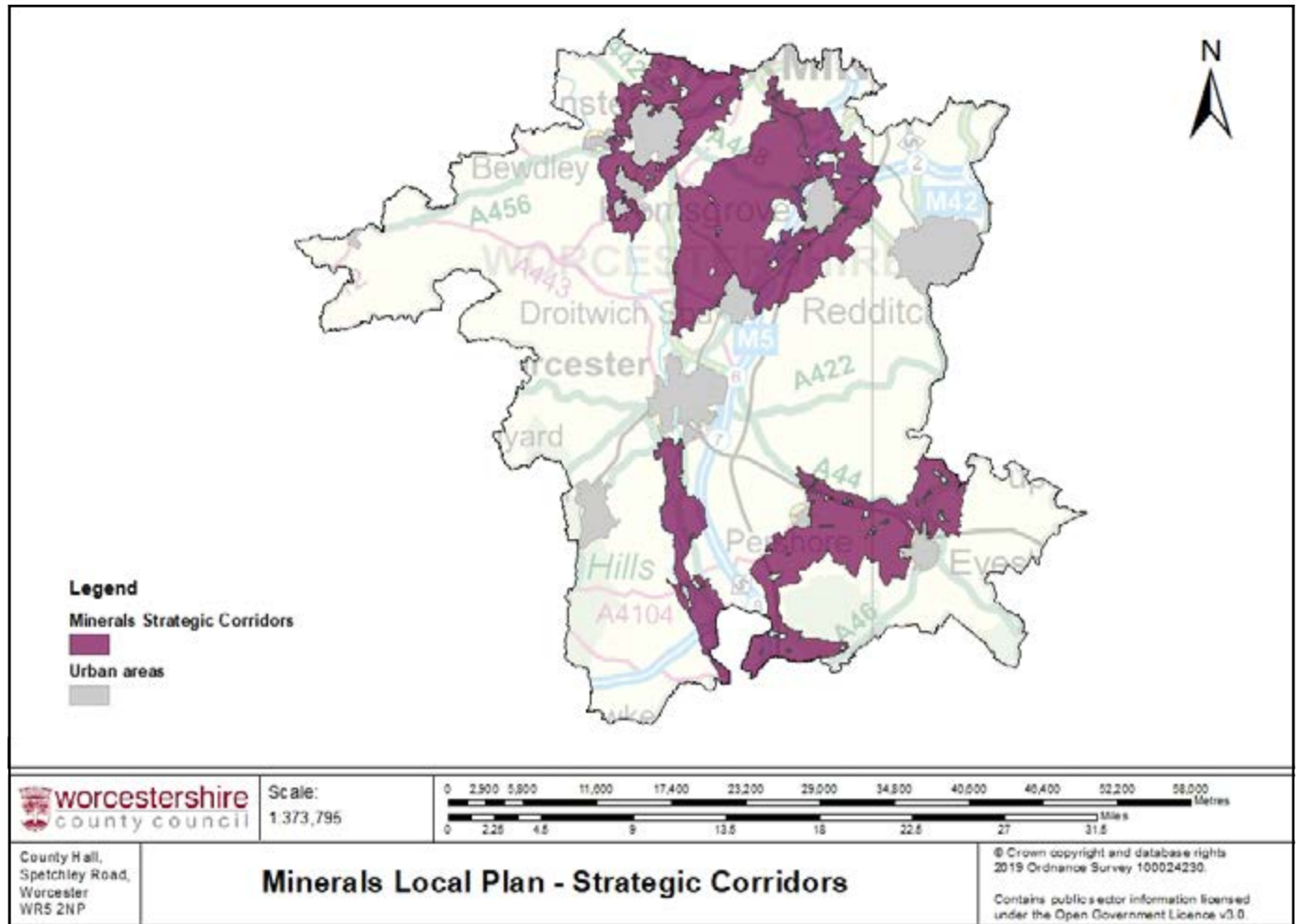
Various types of developments may impact the access and recreation opportunities in Worcestershire. One such type is minerals development which may temporarily impact on existing access and recreation routes and areas, whilst offering the potential to create new recreation opportunities in the long term.

Minerals development may temporarily prevent or alter access to green spaces, public rights of way or other access routes, but there is also significant potential for mineral sites to contribute to the provision of accessible green space and to improve public rights of way networks. By carefully planning and designing individual sites within the context of the wider network of public access routes and green spaces, opportunities to connect, extend or enhance access and recreation assets can be optimised.

The approach of the emerging Worcestershire Minerals Local Plan to the restoration of mineral workings offers opportunities for the creation of new recreation sites. The Plan commits to enabling minerals sites which will deliver restoration of high-quality multifunctional green infrastructure<sup>27</sup>. All mineral working sites will be expected to provide a functional plan for the after-use of these sites, which could include considering the creation of accessible semi-natural green spaces and recreational routes or uses. It is anticipated that such proposals would also deliver local economic, social and/or environmental benefits. Whilst the locations and details of potential minerals sites will be addressed through a Mineral Site Allocations Development Plan Document, the Minerals Local Plan identifies strategic corridors and broad areas of search for minerals development within the county. Figure 6 below illustrates the Minerals Local Plan's Strategic Corridors.

27 Worcestershire County Council, Minerals Local Plan, Publication Version

Figure 6: Minerals Local Plan – Strategic Corridors



## Beckford Nature Reserve



The site of the Beckford Nature Reserve was previously a quarry. Huntsman's Quarries Ltd extracted sand and gravel between 1981 and 1989. During the extraction an interesting geological structure was uncovered that resulted in a section of the quarry being classified as a Site of Special Scientific Interest. After quarrying was complete Huntsman's spent 2 years restoring the site as a conservation area, creating a sizeable lake with a small island.

Currently, the reserve is owned by the community and contains a number of wildlife habitats that have evolved partly through natural succession but also by careful management, assisted by local conservationists.

### 6.5 Creating new assets

Given the apparent limited opportunity to expand existing informal recreation sites, consideration has also been given to identifying areas of search for new sites. Five areas of search for new recreation assets in the county were identified. The areas of search were selected on the following criteria:

- Proximity to areas of expected population growth through new development and areas of existing recreational pressure;
- Proximity to areas of existing or potential recreational interest around which the site can be anchored, such as the River Severn or a country park;
- Proximity to a major transport link such as a road.

The locations of these areas are illustrated on Figure 7 and below is a broad description of their locations and potential functions. Whilst the focus for these areas is on the creation of new large strategic sites it is important to stress that such sites should form part of a wider network of accessible greenspaces of differing sizes.



## Area 1

The location of the Wyre Forest, close to the urban areas of Kidderminster, Stourport-on-Severn and Birmingham, means that it is currently heavily used and additional population growth in these settlements is likely to result in increased pressure in the future. The landscape character and existing natural features of the surrounding areas offer opportunities for the creation of new recreation areas. Creating new publicly accessible areas will not only help to provide additional recreation resources, taking the pressure off other areas of the Wyre Forest, but will also help to meet other landscape objectives.

One of the options includes extending the Wyre Forest cover to the east. The proposed indicative area is within the Principal Timbered Farmlands landscape type<sup>28</sup> which has significant potential for new woodland planting, especially adjacent to existing woodland. Moving east and south towards Kidderminster the character type changes to Sandstone Estatelands and Enclosed Commons, which also have significant potential for woodland planting and the restoration and creation of new tree belts along hedgerows and water courses.

Another potential area could be built around the linear asset of the River Severn. The landscape of the Severn Valley is very distinctive, and creation of a linear park along the river could use and enhance this natural asset to create informal recreation opportunities such as walking, cycling, angling, etc., whilst preserving and enhancing its current landscape and natural and historic environment functions. The emerging Wyre Forest District Local Plan promotes the creation of this linear feature as the Severn Valley Heritage Park.

There is also potential to create a large recreation asset, such as a new country park, to the north of Kidderminster. The completed Kidderminster Flood Alleviation Scheme presents an opportunity to form a country park which will provide a green corridor running from the town centre towards open countryside, incorporating the important wetlands of the Stour and

Blakedown Brook Valleys. Policy 14 Strategic Green Infrastructure of the emerging Wyre Forest District Local Plan safeguards these areas as a potential future country park.

In order to provide visitor interest and ensure the above areas provide a viable alternative to existing areas of the Wyre Forest, significant public access and facilities will need to be provided, including walking and cycling routes, and provision may be needed for some activities, such as mountain biking, that are causing user conflict in the existing Wyre Forest.

## Area 2

The location of the Lickey Hills on the south-west edge of Birmingham means it is heavily used and likely to come under increased pressure as growth in Birmingham (such as at Longbridge) and in Bromsgrove district increases visitor numbers. Waseley Hills Country Park and the Lickey Hills form a green skirt around the urban area between Frankley and Longbridge. Extending this green corridor and the publicly accessible open space east of the Lickey Hills to encompass the Upper and Lower Bittell reservoirs will help reduce existing pressure on the Lickey Hills, whilst providing additional space to absorb increased visitors, especially from the new development at Longbridge.

Locating the open space on the Upper and Lower Bittell reservoirs and the Worcester and Birmingham Canal will provide a sufficiently different visitor experience to the Lickey Hills to make it an attractive alternative for visitors. Enhancing the areas surrounding the Worcester and Birmingham Canal south to Worcester will add another dimension to this area, creating a starting and finishing point to longer-distance walking, cycling and boating activities.

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28 Worcestershire County Council and Forestry Commission (2010) Trees and Woodlands in Worcestershire: Biodiversity and Landscape Guidelines for their Planting and Management

### Area 3

The area around Worcester has few large recreation assets close by and yet significant new housing growth is coming forward to the south, north and west of Worcester and to the south of Droitwich. The Green Belt between Worcester and Droitwich provides an opportunity to create a significant new recreational resource for the county, which enhances the biodiversity and landscape value of the green belt and provides easily accessible recreational space for people from across the sub-region. There may be other opportunities on former landfill sites in the area to provide GI, such as Bilford Road or Hanbury Wharf, subject to considerations of ownership and health and safety, and of their suitability for public access.

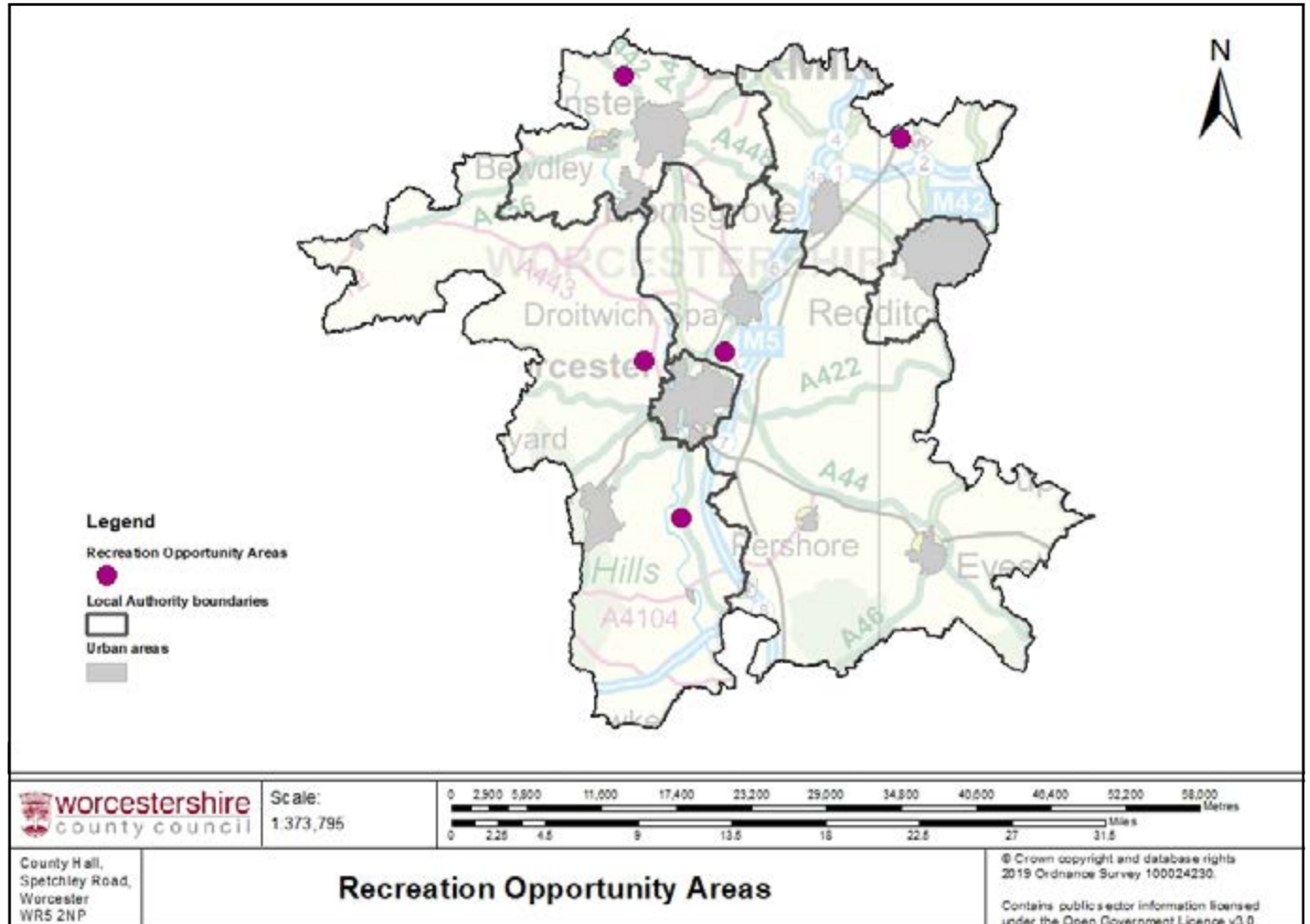
### Area 4

The old gravel pits around Sandford, by the edge of the River Severn just south of Kempsey, provide a significant opportunity to create an alternative destination for visitors to the Malvern Hills (potentially reducing the number of car journeys to the Hills) and an additional resource to serve the significant developments planned for the south of Worcester and north of Great Malvern. This area could focus on water recreation. Visitor facilities and biodiversity enhancements should be considered as part of this potential new asset.

### Area 5

The areas adjoining the River Severn to the north of Worcester, surrounding the villages of Hallow and Grimley, contains many water courses and flooded former gravel pits. This area provides an opportunity to create an additional resource that both enhances biodiversity and helps to provide flood storage. Provision of new recreational opportunities would also be important as the area around Worcester currently has few large assets close by and yet significant housing growth is likely to be seen to the south, north and west of Worcester. Its location close to Worcester may also persuade people to avoid driving long distances for recreation to areas such as the Malvern Hills.

**Figure 7: Recreation opportunity areas**



## 7. Delivery Mechanisms

The creation of new or enhancement of existing GI assets will need to be supported by additional capital funding for the development phase and by revenue funding for ongoing maintenance. A range of potential funding sources are outlined below.

**Local Authorities:** Many Local Authorities have provided significant resources directly and, to a lesser extent, through grant aid funding to other bodies. However, opportunities for direct local authority funding are likely to be severely limited in the future.

**Developer contributions:** Secured as a condition of planning permission. In the past these were obtained through Section 106 of the Town and Country Planning Act 1990, for revenue spending that mitigated an impact of the development. The Community Infrastructure Levy (CIL) allows Local Authorities to set tariffs that apply to all qualifying development, for use more widely in the area in which it is generated.

**Hypothecated taxes:** Refers to the dedication of the revenue from a specific tax for a particular expenditure purpose, an example of which is landfill tax. The Landfill Communities Fund (allocated money from the Landfill Tax) is administered through waste companies and other bodies including The Wildlife Trusts but is not available for revenue expenditure.

**National Lottery:** The National Lottery Heritage fund can provide funding for projects that relate to public parks and urban green spaces.

<https://www.heritagefund.org.uk/our-work/landscapes-parks-nature/public-parks-urban-green-spaces>

The National Lottery Awards for All can provide funding of £300-£10,000 to voluntary and community organisations.

<https://www.tnlcommunityfund.org.uk/funding/programmes/national-lottery-awards-for-all-england>

**Financial markets:** May provide fixed-term loans for capital or revenue funding in the form of bonds. These are most likely to be suitable where there is a secure revenue stream to finance the loan.

**Private sector endowments:** Certain sites may lend themselves to acquiring endowments from individuals, businesses or communities. However, these are likely to be site-specific and unpredictable at a sub-regional level.

**Funding in kind:** Voluntary and not-for-profit groups can be a significant source of labour and expertise, usually more appropriate for revenue than capital projects. Additionally, such groups may have access to funds that local authorities are unable to access.

**Agri-environment schemes:** There are opportunities to use funding from agri-environment schemes to support the development and maintenance of GI assets in Worcestershire. Countryside Stewardship scheme funding is available through DEFRA subject to long-term review pending BREXIT.

**Local Transport Capital Funding:** The integrated transport block capital funding used by local transport authorities for small transport improvement schemes. Schemes can include walking and cycling schemes.

**The Flood and Water Management Act:** The Flood and Water Management Act encourages the use of sustainable drainage in new developments and re-developments and will require drainage systems to be approved.

**Conservation Covenants:** The July 2019 update to the draft Environment Bill introduces conservation covenants which, if adopted by the Government, will allow landowners to set legally binding obligations on their land for themselves and subsequent owners. Conservation covenants will allow landowners to secure environmental benefits for the long term.

**Biodiversity Net Gain Contributions:** Biodiversity Net Gain Contributions are set out in the draft Environment (Principles and Governance) Bill 19 December 2018. Once biodiversity loss has been minimised through mitigation or addressed through compensation, development should also deliver a net gain for biodiversity, either on-site through GI apportionment or off-site, via a net gain tariff.

# Appendix 1: Ecosystem Services and Natural Capital

## Ecosystem services

GI is often described as multifunctional, providing a range of environmental and social services or 'ecosystem services'. The ecosystem services approach is about shifting the focus away from looking at the natural environment in separate 'silos' - e.g. air, water, soil, biodiversity - and towards a more holistic or integrated approach based on whole ecosystems. Ecosystem services are the benefits that a healthy environment provides for people, either directly or indirectly, and four broad types of ecosystem service are usually recognised:

**Table 1: Types of ecosystem services**

<b>Provisioning services</b>	Products obtained from ecosystems, including food, timber, woodfuel, fresh water, biodiversity, genetic resources, biochemicals, natural medicines and pharmaceuticals.
<b>Regulating services</b>	Benefits obtained from the regulation of natural processes, including: the regulation of air quality, climate, flooding and erosion; water purification; disease and pest control; pollination; and buffering pollution.
<b>Cultural services</b>	The non-material benefits people obtain through spiritual enrichment, cognitive development, reflection, recreation and aesthetic enjoyment.
<b>Supporting services</b>	The services that are necessary for the production of all other ecosystem services, including soil formation, photosynthesis, primary production, nutrient cycling and water cycling.

The ecosystem approach means recognising that regardless of its current main use, any area of land has the potential to deliver a very wide range of services (such as flood management, biodiversity or recreation) and it is important that the diversity of these services is recognised in policy and decision making.

## Natural capital

The multifunctional nature of GI means that it can deliver value for money by utilising these natural environment elements also referred to as 'natural capital' whilst maintaining and enhancing its assets.

Natural capital refers to those elements of the natural environment which benefit services to people by underpinning the provision of clean air, clean water, food, recreation and a plethora of high value and often essential goods and services<sup>29</sup>. The services derived from natural capital are generally not accounted for and difficult to measure in terms of market prices. This is why they are often prone to over-exploitation and degradation leading to erosion of this capital, sometimes irreversibly, in the longer term.

The natural capital approach aims to ensure that the UK stock of natural capital is maintained and enhanced in perpetuity by providing either a direct or equivalent economic value to ensure that it supports increased economic growth and an improved quality of life for communities. The main goals of this work are to achieve economic, health and wellbeing benefits.

29 Natural Capital Committee (2015) Advice to Government on Research Priorities

The National Planning Policy Framework (2019)<sup>30</sup> states that planning policies and decisions should contribute to and enhance the natural and local environment by, for example, recognising the wider benefits from natural capital and ecosystem services. The 25 Year Environment Plan<sup>31</sup> published in January 2018 sets out the Government's actions to understand the full value of benefits offered by the environment and cultural heritage to the overall economy and then use these findings in informing any future policy and decision-making.

The Treasury's Green Book has recently been revised by the Government to incorporate natural capital in identifying priorities and appraising policies, programmes and projects. Going forward, a natural capital approach should be integrated throughout the decision-making processes at every level for public spending and land management.

There are multiple models available for assessing natural capital value. The Natural Capital Planning Tool (NCPT) is one example of such a model. The NCPT is a free site-assessment tool developed specifically for the planning context. It allows the indicative assessment of the likely impact of proposed plans and developments on Natural Capital and the ecosystem services it provides to people such as recreational opportunities, air quality regulation and climate regulation<sup>32</sup>.

In the future, a set of metrics for natural capital will be developed in cooperation with scientists, economists and environmentalists to assess the progress towards a better environment.

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30 Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/779764/NPPF\\_Feb\\_2019\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf)

31 HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)

32 <http://ncptool.com/>

## Appendix 2: Key Recreation Assets

The tables below include a list of key Worcestershire recreation assets as portrayed on Figure 1 earlier in this report. It includes both standard assets such as country parks and linear assets such as rivers and canals.

### Standard Assets

Site name	District	Area (ha)
The Wyre Forest	Wyre Forest	2,400.8
The Malvern Hills and Commons	Malvern Hills	1,373.3
River Avon	Wychavon	415.9
River Severn	Malvern Hills	374.7
River Teme	Malvern Hills	305.7
Arrow Valley Country Park	Redditch	223.0
Lickey Hills	Bromsgrove	215.2
Clent Hills	Bromsgrove	209.8
Ribbesford Wood	Wyre Forest	194.8
Kinver Edge	Wyre Forest	161.1
Shrawley Wood	Malvern Hills	157.9
Arley Birch and Coldridge Wood	Wyre Forest	151.6
Kempsey Common	Malvern Hills	103.3
Waseley Hills Country Park	Bromsgrove	60.9
Worcester Woods Country Park	Worcester City	33.8
Riverside Meadows (Stourport-on-Severn)	Wyre Forest	10.1
Bewdley Riverside Corridor	Wyre Forest	8.0
Worcester Riverside	Worcester City	6.3
The Valley (Formerly Evesham Country Park)	Wychavon	39.8

**Linear assets**

Type of asset	Name/Description	Route No (where relevant)	Approx. length in area of interest (km)
Canal	Droitwich Canals		11.4
Canal	Staffordshire & Worcestershire Canal		31.8
Canal	Stratford-upon-Avon Canal (only 690m passes through Worcestershire)		38.4
Canal	Worcester & Birmingham Canal		44.3
Large river	River Avon		72.4
Large river	River Severn		96.7
Large river	River Teme		70.6
National cycle route	Bristol to Rugby via Evesham	Sustrans Route 41	19.4
National cycle route	Droitwich Spa to Newport (Gwent) or Neath via Worcester and Malvern.	Sustrans Route 46	22.3
National cycle route	Salisbury to Chester via Worcester, Droitwich and Kidderminster.	Sustrans Route 45	106.9
National cycle route	Reading to Holyhead via Redditch and Bromsgrove.	Sustrans Route 5	108.2
National cycle route	Stourport to Derby via Kidderminster.	Sustrans Route 54	18.7
Regional cycle route	The Pershore to Worcester Cycle Route	Sustrans Route 442	13.8



## Annex 3: Glossary

### Section 45 Common

- This is a Common described in Section 45 of the Commons Act 2006 as being without an owner. The County, District or Parish Council has powers under the Act to protect this type of Common from encroachment or illegal activities, however, none of the authorities is empowered to sell such a Common.
- Section 45 Commons are also Registered Commons (see below).

### Registered Common

- Registered Commons are protected under the Commons Act 2006
- The public has a legal right of access to Registered Commons 24 hours a day, 7 days a week, 365 days a year.
- No works can be carried out on a Registered Common without the consent of the Secretary of State. Where such works are contentious the application will normally be determined at a Public Inquiry.
- Nothing may be done on the Common that would interfere with the rights of Commoners.
- Permission to build anything on a Common is wholly exceptional.
- The public's right of access is vigorously defended by a number of lobby groups including the Ramblers' Association and Open Spaces Society.
- Because there is a widespread misconception that Commons cannot be owned, they are subject to frequent abuse such as fly-tipping, encroachments and unauthorised work by developers and utility companies.

### Access Land

- Access Land is protected under the Countryside and Rights of Way Act 2000.
- The public has a legal right of access to Access Land 24 hours a day, 7 days a week, 365 days a year except under certain specified circumstances e.g. to prevent fire.
- As a minimum the public has rights on foot, however higher rights of access e.g. by horse may also exist.
- The status of the land severely restricts what activities and developments may take place on the land, particularly where they might interfere with public access.
- Access Authorities have powers to improve access to Access Land e.g. by installing gates in boundaries.

### National Nature Reserves

- National Nature Reserves in England are designated by Natural England as key places for wildlife and natural features in England. They were established to protect the most significant areas of habitat and geological formations.
- NNRs are managed on behalf of the nation, many by Natural England themselves, but also by non-governmental organisations, including The Wildlife Trusts partnership, National Trust and the Royal Society for the Protection of Birds.
- There are over 224 NNRs in England covering around 800 square kilometers (310 square miles).

### **Site of Special Scientific Interest (SSSI)**

- SSSI is a legal designation made under the Wildlife and Countryside Act 1981.
- SSSIs protect the country's most important wildlife and geological sites.
- The landowner has a legal duty to carry out proactive management to get and maintain the site in "favourable condition" as described by Natural England.
- No work can be carried out on the SSSI without Natural England consent which will not be forthcoming if there is any risk to the habitat.
- If the landowner fails to maintain the SSSI in favourable condition, Natural England may take legal action against them, including the power of compulsory purchase.

### **Country Park**

- A Country Park is an area designated for people to visit and enjoy recreation in a countryside environment as opposed to a more formal urban park. Country Parks are usually found close to or on the edge of built-up areas.
- There are around 250 recognised Country Parks in England and Wales, attracting some 57 million visitors a year. Most country parks were designated in the 1970s, under the Countryside Act 1968, with the support of the former Countryside Commission. In more recent times there has been no specific financial support for country parks directly, and fewer have been designated.
- Most Country Parks are managed by local authorities, although other organisations and private individuals can also run them.
- Managers of Country Parks in England can currently apply to be part of the Country Park Accreditation Scheme run by Natural England. Accreditation shows that the park has essential facilities and services that you would expect to see. The accreditation criteria also shows designers and planners what a good country park should offer.

### **Local Nature Reserve**

- LNRs are designated under the National Parks and Access to the Countryside Act 1949 as amended by the Natural Environment and Rural Communities Act 2006.
- The purpose of the designation is to prevent the site from being developed and to ensure that its special qualities are maintained or enhanced for the benefit of the public.

### **Picnic Place**

- A Picnic Place is a relatively small site with car parking and picnic tables.
- The majority of picnic places on the map are managed by Worcestershire County Council.
- They act as a gateway to the wider countryside, with either waymarked trails, recreational routes or public footpaths starting/finishing or running through them.

### **Millennium Green**

- These are areas of green space managed by a local Trust for the benefit of communities. 245 Greens were created in cities, towns and villages across England to celebrate the turn of the Millennium.
- Their creation was funded in part by the National Lottery via the Countryside Agency. Each one is different, as local people have had an input into the design of their green.
- Each Trust now fundraises for and runs its own green, within the bounds of its trust deed, for the benefit of its local community.

### **Doorstep Green**

- Similar to Millennium Greens, Doorstep Greens are locally owned and run public spaces, created through lottery funding by the Countryside Agency and local communities in a project started in 2001.
- Each Green is now owned and managed by a Trust in perpetuity.

### **Area of Outstanding Natural Beauty (AONB)**

- An AONB is a statutory designation made under the National Parks and Access to the Countryside Act 1949 as amended by subsequent legislation.
- The purpose of AONBs is to conserve and enhance natural beauty and to promote sustainable development and land use, seeking to balance the needs of rural industries, local communities, landscape conservation and recreation.
- AONB designation is a material consideration in planning applications and mitigates against most development in open countryside.

### **Public Right of Way (PROW)**

- Public Rights of Way are governed by the National Parks and Access to the Countryside Act 1949 as amended by subsequent legislation.
- The public has a legal right of access 24 hours a day, 7 days a week, 365 days a year except under certain specified circumstances e.g. when a Temporary Closure Order has been made for safety reasons.
- Public Rights of Way can only be diverted or closed following a lengthy legal process which is frequently not successful.
- The public's right of access is vigorously defended by a number of lobby groups including the Ramblers' Association and Open Spaces Society.

### **Sustrans Route**

- Cycle route, part of the 12,600 miles of National Cycle Network.
- The routes are high-profile and popular, so failure to keep them in good condition would be likely to attract negative publicity from Sustrans and user groups.

### **Recreational Route**

- Waymarked Trails such as the Worcestershire Way or Severn Way predominantly follow Public Rights of Way.
- They are popular with walkers from outside the county and make a significant contribution to the local economy.
- They are also popular with local people and charitable organisations.
- All of the constraints applicable to Public Rights of Way (above) apply.

Please contact us if you need this document in another format, or if you have any questions.

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